· Set

# 10/750683

# **Refine Search**

Your wildcard search against 10000 terms has yielded the results below.

### Your result set for the last L# is incomplete.

The probable cause is use of unlimited truncation. Revise your search strategy to use limited truncation.

Search Results -

Terms	Documents
L12 and suspens\$ and (damp\$ with coef\$) and ((mass\$ and damp\$ and stiff\$) with matri\$)	2
US Pre-Grant Publication Full-Text Database	

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

L13

Refine Search
Interrupt

### Search History

DATE: Friday, October 27, 2006 Purge Queries Printable Copy Create Case

Name side by side	Query	Hit Count	Set Name result set
DB=P $OP=OR$	PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; THES=ASSIGNEE; PLUR=Y	ES;	
OI -OK			
<u>L13</u>	L12 and suspens\$ and (damp\$ with coef\$) and ((mass\$ and damp\$ and stiff\$) with matri\$)	2	<u>L13</u>
<u>L12</u> `	18 or 19 or 110 or 111	16	<u>L12</u>
DB=U	ISPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
<u>L11</u>	(5358305)![PN]	1	<u>L11</u>
DB=U	ISPT,DWPI; THES=ASSIGNEE; PLUR=YES; OP=OR		
<u>L10</u>	("5536059"  "US20050038584A")[ABPN1,NRPN,PN]	3.	<u>L10</u>
<u>L9</u>	("5536059"  "US20050038584A")[URPN]	12	<u>L9</u>
DB=P	GPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; THES=ASSIGNEE; PLUR=Y	ES;	

OP = OR			
<u>L8</u>	L7 and (spring\$ near3 coeff\$)	2	<u>L8</u>
<u>L7</u>	L6 and (vehicle or automobile or car)	4	<u>L7</u>
<u>L6</u>	14 or L5	6	<u>L6</u>
<u>L5</u>	suspens\$ and (damp\$ with coef\$) and ((mass\$ and damp\$ and stiff\$) with matri\$) and @pd<=20030813	6	<u>L5</u>
<u>L4</u>	L3 and ((mass\$ and damp\$ and stiff\$) with matri\$)	6	<u>L4</u>
<u>L3</u>	suspens\$ and (damp\$ with coef\$) and ((mass\$ or damp\$ or stiff\$) with matri\$) and @pd<=20030813	23	<u>L3</u>
DB=U	JSPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
<u>L2</u>	suspens\$ and (damp\$ with coef\$) and ((mass\$ or damp\$ or stiff\$) with matri\$) and @ad<=20030813	21	<u>L2</u>
<u>L1</u>	5369709.pn. or 5838812.pn.	2	<u>L1</u>

# END OF SEARCH HISTORY

### Hit List

First Hit Clear Generate Collection Print Fwd Refs Bkwd Refs

Generate OACS

**Search Results** - Record(s) 1 through 6 of 6 returned.

☐ 1. Document ID: US 6170202 B1

L6: Entry 1 of 6

File: USPT

Jan 9, 2001

US-PAT-NO: 6170202

DOCUMENT-IDENTIFIER: US 6170202 B1

TITLE: Building system using shape memory alloy members

Full Title Citation Front Review Classification Date Reference <mark>能能够多数。以此的形式的</mark> Claims KMC Draw De

☐ 2. Document ID: US 6077302 A

L6: Entry 2 of 6

File: USPT

Jun 20, 2000

US-PAT-NO: 6077302

DOCUMENT-IDENTIFIER: US 6077302 A

TITLE: System and method for analyzing and designing vibration isolators

Full | Title | Citation | Front | Review | Classification | Date | Reference | Edit |

△ □ 3. Document ID: US 5765313 A

L6: Entry 3 of 6

File: USPT

Jun 16, 1998

US-PAT-NO: 5765313

DOCUMENT-IDENTIFIER: US 5765313 A

TITLE: Method and apparatus for real-time structure parameter modification

Full Title Citation Front Review Classification Date Reference

☐ 4. Document ID: US 5536059 A

L6: Entry 4 of 6

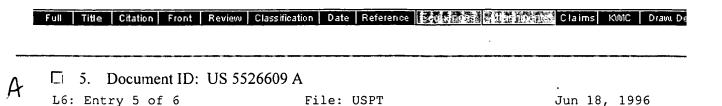
File: USPT

Jul 16, 1996

US-PAT-NO: 5536059

DOCUMENT-IDENTIFIER: US 5536059 A

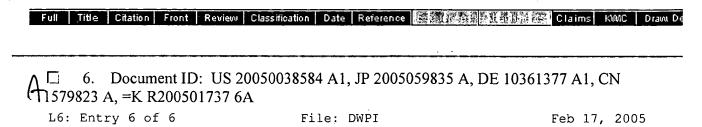
TITLE: Seat <u>suspension</u> system using human body responses



US-PAT-NO: 5526609

DOCUMENT-IDENTIFIER: US 5526609 A

TITLE: Method and apparatus for real-time structure parameter modification



DERWENT-ACC-NO: 2005-172365

DERWENT-WEEK: 200646

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TITLE: Designing method of vehicle <u>suspension</u> system involves normalizing linear matrix equation using similarity transform matrix including degrees of freedom of <u>suspension</u> system and number of independent actuators, with several matrices

	Full	Title   Citation	Front Review	Classification	Date	Reference	3.80	6.5	en de la se	外部。	Claims	KWIC	Draw De
_	Clear	Genera	ate Collection	Print	1	wd Refs		Bkwd I	Refs		Genera	ate OA	cs 1
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		Terms L4 or L5	)	<del></del>		cument	.s 					6	
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First Hit Next Doc Go to Doc# Previous Doc **End of Result Set** Print Generate Collection

L7: Entry 4 of 4

File: DWPI

Feb 17, 2005

DERWENT-ACC-NO: 2005-172365

DERWENT-WEEK: 200646.

COPYRIGHT 2006 DERWENT INFORMATION LTD

TITLE: Designing method of <u>vehicle suspension</u> system involves normalizing linear matrix equation using similarity transform matrix including degrees of freedom of suspension system and number of independent actuators, with several matrices

INVENTOR: KIM, J H

PATENT-ASSIGNEE: HYUNDAI MOTOR CO (HYUNN), HYUNDAI MOTOR CO LTD (HYUNN), GENDAI JODOSHA KK (GENDN), KIM J. H (KIMJI)

PRIORITY-DATA: 2003KR-0056189 (August 13, 2003)

Search Selected Search ALL Clear

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20050038584 A1	February 17, 2005		015	B60G023/00
JP 2005059835 A	March 10, 2005		020	B60G017/015
DE 10361377 A1	March 17, 2005		000	B60G017/00
CN 1579823 A	February 16, 2005		000	B60G017/015
=K R200501737 6A	May 2, 2020	0	400	B60G017/00

#### APPLICATION-DATA:

PUB-NO	APPL-DATE		APPL-NO	DESCRIPTOR
US20050038584A1	December 31,	2003	2003US-0750683	
JP2005059835A	December 12,	2003	2003JP-0415776 ·	
DE 10361377A1	December 29,	2003	2003DE-1061377	
CN 1579823A	December 31,	2003	2003CN-1012421	
(406 R		•		•

INT-CL (IPC): -B60G 17/00; B60G 17/015; B60G 23/00

ABSTRACTED-PUB-NO: US20050038584A

BASIC-ABSTRACT:

NOVELTY - The method involves formalizing a vehicle suspension system by satisfying a linear  $\underline{\text{matrix}}$  equation and normalizing the equation using similarity transform <u>matrix</u> that includes the degrees of freedom of the <u>suspension</u> system and the number of independent actuators, with a <u>mass matrix</u>, a <u>damping matrix</u> and a <u>stiffness</u> matrix.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the  $\underline{\text{vehicle}}$   $\underline{\text{suspension}}$  system.

USE - For designing vehicle suspension system.

ADVANTAGE - Reduce vibration and enhanced the performance of the <u>suspension</u> system by efficiently determining predetermined factors e.g. spring <u>coefficient</u>, <u>damping</u> <u>coefficient</u> and the mounting positions of the springs and <u>dampers</u>.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of the  $\underline{\text{vehicle}}$   $\underline{\text{suspension}}$  system.

Sensor unit 110

Wheels 120

Dampers 130

Springs 140

Controller 150

ABSTRACTED-PUB-NO: US20050038584A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.1/6

DERWENT-CLASS: Q12 X22

EPI-CODES: X22-M;

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Record Display Form

First Hit Fwd Refs

Previous Doc Next Doc Go to Doc#

Generate Collection Print

L8: Entry 1 of 2

File: USPT

Jul 16, 1996

US-PAT-NO: 5536059

DOCUMENT-IDENTIFIER: US 5536059 A

TITLE: Seat <u>suspension</u> system using human body responses

DATE-ISSUED: July 16, 1996

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Amirouche; Farid M. L. Highland Park IL

ASSIGNEE-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY TYPE CODE

University of Illinois Chicago IL 02

APPL-NO: 08/334153 [PALM]
DATE FILED: November 4, 1994

INT-CL-ISSUED: [06] B60N 2/52

INT-CL-CURRENT:

TYPE IPC DATE
CIPP <u>B60 N 2/50</u> 20060101

US-CL-ISSUED: 296/65.1; 188/299, 248/550, 248/566, 267/131, 280/707

US-CL-CURRENT: 296/65 22; 138/266.1, 248/550, 248/566, 267/11

FIELD-OF-CLASSIFICATION-SEARCH: 296/65.1, 180/282, 280/707, 280/714, 188/299,

267/131, 248/550, 248/559, 248/566, 364/424.05 See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

PAT-NO ISSUE-DATE PATENTEE-NAME US-CL

5358305 October 1994 Kaneko et al. 296/65.1

ART-UNIT: 312

PRIMARY-EXAMINER: Pike; Andrew C.

ATTY-AGENT-FIRM: Banner & Allegretti, Ltd.

#### **ABSTRACT:**

An active seat <u>suspension</u> system for equipment that transfers vibration to a human operator provides human body vibration control and, thus, a more comfortable environment for the operator. The system utilizes a "man in a loop" control strategy, where both the equipment and human operator model are analyzed as a dynamic system. The seat <u>suspension</u> parameters are evaluated through optimization, which assumes, under normal stochastic conditions, that the vibratory inputs to the system are unknown. A controller estimates their values in real time, and a preferred characteristic force between the seat and machinery is determined. The characteristic force determined minimizes a cost function. Using an output from the controller, an actuator (which may be either active or semi-active) substantially applies the characteristic force between the seat and machinery, resulting in reduced vibration being transmitted to the human operator.

8 Claims, 12 Drawing figures

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